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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/652,793

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Kim A. Ryal

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O'BANION & RITCHEY LLP/ SONY ELECTRONICS, INC.
400 CAPITOL MALL
SUITE 1550
SACRAMENTO, CA 95814

EXAMINER

HARVEY, DAVID E

ART UNIT

PAPER NUMBER

2621

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/652,793	Applicant(s) RYAL, KIM A.	
	Examiner DAVID E. HARVEY	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-19 and 38-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-19 and 38-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/29/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

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1. **The examiner maintains that the desire, need, and process of selectively “deleting” and “undeleting” recorded video content was notoriously well known to those of ordinary skill in the computer and video recording arts. The following “prior art” has been cited as being illustrative of this fact:**

A) US Patent Document #2003/0180031 to Kikuchi et al.:

As shown in Figure 34, Kikuchi et al discloses a system for recording video content. As shown in Figures 36 and 36, the system permits the user to “temporarily delete” portions of the recorded content (e.g., @ B22). As is shown in Figure 40, the system then permits the user to “undelete” or “erase” the “temporarily deleted content” (e.g., @ C9 and C10).

B) US Patent #6,785,465 to Koshino et al.:

As shown in Figures 55-56, Koshino et al discloses “recoverable erasure” and “erasure cancellation” process for video recording device (@ Figure 1).

C) US Patent #6,763,179 to Park et al.:

As set forth in the abstract on the cover page, Park et al discloses a system in which video data is temporarily deleted such that it can be fully restored at some later time.

D) The showing of US Patent Document #2004/0073954 to Bjordammen et al.

Bjordammen et al has been cited because it recognized that deleted video content in the DVR/PVR art was similar to file content in the computer storage art in that it was not actually erased from the disk until it was actually overwritten by new content and, as such, the deleted content could still be retrieved, deliberately or un-deliberately:

“DVR storage is similar to file storage on computer systems. Typically, when program material is “deleted”, it is not actually erased. Instead, directory entries and disk space allocation tables are altered to mark the space occupied by the content as unused, but the stored content remains on the storage medium and can potentially be retrieved, either deliberately or accidentally. Eventually, the deleted content will be overwritten by other content, but until it is overwritten the raw storage medium retains the deleted content.”

[Paragraph 0023]

E) The showing of US Patent #5,825,739 to Saito et al.

Saito et al has been cited for it showing of how recorded content was conventionally edited (including deleted) by marking TOC pointers (i.e., addressed that point to the recorded content):

"This editing operation can be easily realized solely by changing the TOC data without changing actually recorded data. For erasing data on an optical disc, for example, it suffices to erase the TOC data concerning the data desired to be erased. For dividing one data into plural data, it suffices to divide the TOC data for the data desired to be divided into plural TOC data. At which portion of a data the data is to be divided is designated by the user. For connecting two or more data, it suffices to change the TOC data of the data desired to be connected, with the recording start address of the leading data as the recording start address of the connected data and with the recording end address of the terminal data as the recording end address of the connected data. Which data should be connected to which data is designated by the user. For moving data, for example, the first data, it suffices to rewrite a portion specifying which number data in the TOC data is the first data so that the first data will become the fifth data. For appending a title to data or modifying a title, it suffices to append a title to or modify data equivalent to a title of the TOC data.

The editing operation is disclosed in the specification and drawings of WO 95/04990.

The above-mentioned change of the TOC data accompanying the editing operation including erasure, division, connection or movement of data or title appendage, is performed on the memory. Specifically, during the editing operation, the TOC data is modified or updated on a memory of a controller controlling the recording/reproducing apparatus and the TOC data in the management data recording area on the optical disc is rewritten when the editing comes to a close."

[Beginning @ line 62 of column 1]

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2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,171,110 to Wilshire in view of applicant's admitted "prior art" and US patent Document #2007/0127887 to Yap et al.

A) The showing of Wilshire:

Wilshire has been cited for its illustration of conventional PVR recording structure and operation. As is described with respect to Figure 3, conventional PVRs were known to have included:

1) A **video interface** (e.g., @ 8) configured to receive and transmit video streams;

2) A "**data storage unit**" (e.g., @ 14) for storing video content (e.g., A/V files);

3) A "**computer processor**" (e.g., @ 30) configured to control the recording/playback of the video content to/from the data storage unit [Note lines 42-47 and 59-64 of column 5]; and

4) A "**user interface**" (e.g., a remote control input unit) for receiving at least record and playback commands from the user [Note lines 59-64 of column 5];

and **means** (e.g., including element 8) for causing selected video content (i.e., ones recorded A/V files) to be selectively deleted or overwritten [e.g., 39-50 of column 4].

B) Applicant's admitted "prior art":

1) In paragraph 0006 of the instant specification, applicant appears to acknowledge the existence of conventional PVR of the type discussed above with respect to Wilshire;

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2) In paragraph 0007 of the instant specification, applicant acknowledges that that is was known for the disk of such conventional PVRs devices to become full of video content.

Applicant also acknowledges that it was convention of such PVRs to have comprised circuitry for enabling the user to delete elements of existing recorded video content in order to free sufficient recording space on the disk to record additional/new video content.

3) In paragraph 0008 of the instant specification, applicant acknowledges that that is was known for the deleting circuitry of such conventional PVRs devices to have marked recorded content for deleting:

a) By actually erasing the recorded video content on the disk;

or

b) By remapping storage allocation of the disk to free content space.

3) *In paragraphs 0008 and 0009 of the instant specification, applicant contends that such conventional PVRs were unable to “undelete” the recorded video content once it had been marked for “deletion”.*

C) Differences:

As alleged by applicant (note part “B” of this rejection), claim 12 differs from the conventional PVR described in Wilshire only in that the “means” of Wilshire’s PVR was not described as removing the deleted content from a play list while deferring the release of the storage space pertaining thereto until the storage space is needed for the recording of additional content.

D) The showing of Yap et al. & Obviousness

Yap et al described a DVR/PVR device (e.g., @ Figure 11) which is capable of recoverably deleting recorded television program files by flagging the recorded television program files for deletion and “moving” the so flagged television program files from a recorded program menu/directory to a deleted program menu/directory where they will remain until they are:

a) “Undeleted” by the user and moved back to the recorded program content menu/directory;

b) “Purged” (i.e., permanently deleted) by the user; or

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c) Overwritten by the system because the disk has run out of disk space.

"A further enhance feature in accordance with the invention is an undelete feature. The undelete feature permits users to recover recorded programs that have been previously designated to be deleted but which have not actually been purged (erased or permanently removed from storage). For example, a user, via a suitable user-interface such as remote control 400, can undelete a previously deleted recording.

This feature is available because when a user selects a recorded program to be deleted, the recording is not erased in HDD 320, so long as HDD 320 is not out of disk space. Additionally, on a displayed list of recorded programs on EPG 80 or on other menus, a program set for delete is not typically displayed. Alternatively, the user may display a list of program files flagged for deletion.

FIG. 17 illustrates an exemplary menu display for the undelete feature in accordance with the invention. As shown in FIG. 17, the user would bring up a menu screen 1700 (here entitled "Deleted Programming") which has a tabular list of deleted programs in cell 1701.

The user simply highlights the desired deleted programs using scroll keys, and then selects the UNDELETE cell 1702 on menu 1700. Conversely, this menu also enables the user to purge (permanently delete) recorded programming using PURGE cell 1703, although preset system preferences and background processes purge the mass storage device (HDD 320) of programming designated for deletion after a period of time, which may be adjusted by the user. Selection of either the UNDELETE cell 1702 or PURGE cell 1703 automatically prompts a confirmation pop-up window for the user.

Yet another enhanced feature envisioned by the present invention is a DVR Play List. In this aspect, and from a selectable menu list of recorded programs on display device 370, a user selects multiple programs for playback by STB 300 via a user-interface such as remote control

400. The order of playback is preferably user-specified. Moreover, the DVR play list feature enables the ability to create, save, and edit multimedia play lists on STB 300." (Emphasis added)

[Paragraphs 0170-0174]

In light of the showing of Yap et al., the examiner maintains that it would have been obvious to one of ordinary skill in the video recording art to have modified the conventional PVR of Wilshire to recoverably delete the A/V files in the manner described by Yap et al.; i.e., given that such a feature was known to be desirable as evidenced by Yap et al. (i.e., to recover content that was accidentally deleted).

4. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,171,110 to Wilshire in view of applicant's admitted "prior art" and US patent Document #2007/0127887 to Yap et al. for the same reasons that were set forth above for claim 12. Additionally:

As was notoriously well known in the art, and as implicitly alluded to by Yap et al. and indeed applicant's admission of "prior art", when the A/V files on a HDD drive are temporarily deleted the TOC/Directory corresponding thereto (i.e., the "pointers" pointing thereto) are "marked"/"flagged" so as to identify the corresponding file as a deleted one, and identifying the space related thereto as being available for overwriting should the space be needed to store new content/files. As such, the examiner contends that the "pointers" of deleted files in the modified system of Wilshire are moved to a replacement queue in at least a logical sense (if not a physical one).

5. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,171,110 to Wilshire in view of applicant's admitted "prior art" and US patent Document #2007/0127887 to Yap et al. for the same reasons that were set forth above for claim 13. Additionally:

Note lines paragraph 0173 of Yap et al.

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6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,171,110 to Wilshire in view of applicant's admitted "prior art" and US patent Document #2007/0127887 to Yap et al. for the same reasons that were set forth above for claim 14.

7. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,171,110 to Wilshire in view of applicant's admitted "prior art" and US patent Document #2007/0127887 to Yap et al. for the same reasons that were set forth above for claim 14. Additionally:

Note lines 5-9 in paragraph 0173 of Yap et al.

8. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,171,110 to Wilshire in view of applicant's admitted "prior art" and US patent Document #2007/0127887 to Yap et al. for the same reasons that were set forth above for claim 16.

9. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,171,110 to Wilshire in view of applicant's admitted "prior art" and US patent Document #2007/0127887 to Yap et al. for the same reasons that were set forth above for claim 13. Additionally:

Note lines paragraph 0173 of Yap et al. (until it is overwritten, recorded content/space is not reallocated).

10. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,171,110 to Wilshire in view of applicant's admitted "prior art" and US patent Document #2007/0127887 to Yap et al. for the same reasons that were set forth above for claim 18. Additionally:

As indicated in lines 47-56 of Wilshire, the examiner maintains that it was notoriously well known to have implemented PVR systems/structure via software.

11. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,171,110 to Wilshire in view of applicant's admitted "prior art" and US patent Document #2007/0127887 to Yap et al. for the same reasons that were set forth above for claim 19.

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12. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,171,110 to Wilshire in view of applicant's admitted "prior art" and US patent Document #2007/0127887 to Yap et al. for the same reasons that were set forth above for claim 38. Additionally:

Note lines paragraph 0173 of Yap et al.

13. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,171,110 to Wilshire in view of applicant's admitted "prior art" and US patent Document #2007/0127887 to Yap et al. for the same reasons that were set forth above for claim 39.

14. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,171,110 to Wilshire in view of applicant's admitted "prior art" and US patent Document #2007/0127887 to Yap et al. for the same reasons that were set forth above for claim 39. Additionally:

Note lines 5-9 in paragraph 0173 of Yap et al.

15. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,171,110 to Wilshire in view of applicant's admitted "prior art" and US patent Document #2007/0127887 to Yap et al. for the same reasons that were set forth above for claim 41.

16. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,171,110 to Wilshire in view of applicant's admitted "prior art" and US patent Document #2007/0127887 to Yap et al. for the same reasons that were set forth above for claim 38. Additionally:

Note lines paragraph 0173 of Yap et al. (until it is overwritten, recorded content/space is not reallocated).

17. Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,171,110 to Wilshire in view of applicant's admitted "prior art" and US patent Document #2007/0127887 to Yap et al. for the same reasons that were set forth above for claim 43. Additionally:

As was notoriously well known in the art, and as implicitly alluded to by Yap et al. and indeed applicant's admission of "prior art", when the A/V files on a HDD drive are

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temporarily deleted the TOC/Directory corresponding thereto (i.e., the “pointers” pointing thereto) are “marked”/“flagged” so as to identify the corresponding filed as a deleted one, and identifying the space related thereto as being available for overwriting should the space be needed to stored new content/files. As such, the examiner contend that the “pointers” of deleted filed in the modified system of Wilshire are moved to a replacement queue in at least a logical sense (if not a physical one).

18. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,171,110 to Wilshire in view of applicant’s admitted “prior art” and US patent Document #2007/0127887 to Yap et al. for the same reasons that were set forth above for claim 19.

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19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID E. HARVEY whose telephone number is (571) 272-7345. The examiner can normally be reached on M-F from 6:00AM to 3PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Marsha D. Banks-Harold, can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/DAVID E HARVEY/

Primary Examiner, Art Unit 2621

DAVID E HARVEY
Primary Examiner
Art Unit 2621